UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
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ART UNIT	PAPER NUMBER
2195	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

		Application No.	Applicant(s)
Office Action Summary		09/876,645 .	SUN ET AL.
		Examiner	Art Unit	
		Kenneth Tang	2195 .	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 04 October 2007.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 07 June 2001 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-SB/08)
    Paper No(s)/Mail Date 5/15/07, 10/4/07.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

1.   This action is in response to the Amendment on 10/4/07. Applicant's arguments have

been fully considered but are moot in view of the new grounds of rejections.

2.   Claims 1-36 are presented for examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

3.   Claims 1-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant regards as

the invention.

4.   In claim 1, the limitation "**only if** a workflow is successfully completed by a <u>first</u>

<u>workflow engine</u> for an execution-requesting client, sending a notification to the execution-

requesting client", is indefinite because in dependent claim 8, it has a further limitation of

"sending a notification to the execution-requesting client if the workflow is completed by the

<u>second workflow engine</u>", which is contradictory and thus unclear. It is unclear whether a

notification is really only sent if a workflow is successfully completed by a first workflow

engine. In other words, claim 1 limits that sending a notification can only occur upon a

successful completion by a first workflow engine. However, dependent claim 8 states that a

notification can be sent upon completion by a second workflow engine. This is contradictory

and thus the scope of the claim cannot be ascertained, and therefore, should be rejected under 35

U.S.C. 112, 2nd paragraph. In addition, claim 1 states sending a workflow assignment message

in response to the second workflow engine alone completes the workflow. The said message

could also be interpreted as a "notification", therefore, making the claim language unclear and

indefinite.

5.   Claims 2-8 are rejected as being dependent claims of rejected claim 1.

6.   Claims 9-36 are rejected for similar reasons as stated in the rejection of claims 1-8 above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7.   **Claims 1-3, 9-11, 17-18, 22-23, 27-28, and 32-33 are rejected under 35 U.S.C. 103(a)**

as being unpatentable over Campbell et al. (hereinafter Campbell) (US 2001/0024497 A1)

in view of Kitagawa et al. (hereinafter Kitagawa) (US 6,578,159 B1), and further in view of

Hayashi et al. (hereinafter Hayashi) (US 5,832,455).

8.   As to claim 1, Campbell teaches a method to be performed by a data processing system to

improve fault tolerance ([0044], Abstract) comprising:

providing distributed queuing of workflows (workflow manager), whose execution is

requested by one or more execution-requesting clients, among a plurality of workflow engines

(page 5, [0084], page 6, [0085]);

9.   In the citations shown above, Campbell teaches a first workflow engine for an execution-requesting client. However, Campbell is silent on sending a notification if a workflow is successfully completed.

10.   Kitagawa teaches queuing of workflows and sending a notification to the requesting client such as a "normal completion notice" when the workflow is successfully completed (col. 8, lines 43-53). Kitagawa's "normal completion" relates to the Applicant's successful completion while Kitagawa's "abnormal completion" relates to the Applicant's unsuccessful completion of the workflow.

11.   One of ordinary skill in the art would have known to modify Campbell's workflow system such that it could recognize when its workflows are successfully completed (normal completion) by using a notification means. The suggestion/motivation for doing so would have been that identifying between successfully completed (normal completion) workflows and unsuccessfully completed (abnormal completion) workflows would provide the predicted result of allowing for identification of workflows of normal or abnormal completions such that abnormal completions could be handled accordingly (such as error recovery, as only one example) to improve processing (col. 1, lines 6-12).

12.   Campbell and Kitagawa are silent on assigning workflow to a second workflow engine by sending it a work assignment message, wherein the second workflow engine alone completes the workflow.

        However, Hayashi teaches a workflow system such that if a task is a failure or not completely successful, it is then put in a failure state, and another executing means is assigned to

recover the task from the failure state (see claim 1). This is all done without sending a notification message.

Campbell, Kitagawa and Hayashi are all analogous art because they are in the same field of endeavor of workflow processing. One of ordinary skill in the art would have known to modify Campbell and Kitagawa's workflow system such that when a workflow is a failure or not successfully completed, another executing means gets assigned, without receiving a "notification", to recover and complete the workflow.

The suggestion/motivation for doing so would have been to be able to provide the predicted result of enabling workflow management that would recover the failed/unsuccessfully completed workflows.

Therefore, it would have been obvious to one of ordinary skill in the art to combine Campbell, Kitagawa, and Hayashi to obtain the invention of claim 1.

13.   As to claim 2, Campbell teaches wherein providing is performed by a load manager (workflow manager) *(page 5, [0084], page 6, [0085])*.

14.   As to claim 3, Campbell teaches wherein the load manager comprises a commercially available middleware product *(page 15, [0208])*.

15.   As to claims 9-11, they are rejected for the same reasons as stated in the rejection of claims 1-3, respectively.

16.   As to claim 17, it is rejected for the same reasons as stated in the rejection of claim 1. In

addition, Campbell teaches the computer operating in a fault-tolerant manner and requesting a

workflow execution on behalf of a client *(page 2, [0043] and [0044], page 4, [0061] and*

[0063]).

17.   As to claims 18, it is rejected for the same reasons as stated in the rejection of claim 2.

18.   As to claim 22, it is rejected for the same reasons as stated in the rejection of claim 17.

19.   As to claim 23, it is rejected for the same reasons as stated in the rejection of claim 2.

20.   As to claim 27, it is rejected for the same reasons as stated in the rejection of claim 17.

21.   As to claim 28, it is rejected for the same reasons as stated in the rejection of claim 2.

22.   As to claims 32-33, they are rejected for the same reasons as stated in the rejections of

claims 22-23.

23.   **Claims 4-8, 12-16, 19-21, 24-26, 29-31, and 34-36 are rejected under 35 U.S.C. 103(a)**

as being unpatentable over Campbell et al. (hereinafter Campbell) (US 2001/0024497 A1)

in view of Kitagawa et al. (hereinafter Kitagawa) (US 6,578,159 B1), in view of Hayashi et

al. (hereinafter Hayashi) (US 5,832,455), and further in view of Maffeis ("Middleware

Support for Application-to-Application Wireless Messaging", July 2000).

24.   As to claim 4, Campbell teaches wherein the notification can be performed by email

[0093]. Campbell, Kitagawa and Hayashi is silent in that that the message is performed by a

certified message capability. However, Maffeis teaches sending messages by a

certified/guaranteed message delivery (page 16, bullet points 2 and 3). It would have been

obvious to one of ordinary skill in the art at the time the invention was made to modify

Campbell, Kitagawa and Hayashi's messages to have the capability of being certified or

guaranteed because Maffeis states that it is appealing for transactions because the message is

delivered to its destination in spite of network outages and failures of devices or message servers

(page 16, bullet 2).

25.   As to claim 5, Campbell teaches that all communication types are workflow enabled and

pass through the load manager (workflow manager) *(page 5, [0084])*.

26.   As to claim 6, Campbell teaches wherein the load manager comprises a commercially

available middleware product *(page 15, [0208])*.

27.   As to claim 7, Campbell teaches wherein the certified messaging capability is performed

by a certified message receiver forming part of the workflow *(page 1, [0004], page 5, [0084])*.

28.   As to claim 8, Maffeis teaches sending a notifications with the certified message

capability to the execution-requesting client (page 16, bullet points 2 and 3). The prior art

references are silent that a notification is made when the second workflow engine completes the

workflow or recovers from the failed state. Firstly, this claim contradicts claim 1 in that it states

that a notification is made only if a workflow is successfully completed <u>by a first workflow</u>

<u>engine.</u> Claim 8 is stating that a notification can be made upon successfully completed <u>by a</u>

<u>second workflow engine.</u> Nevertheless, when there is a recovery being made from a failed state,

it would be obvious to have an update or notification so that it is known that the workflow is no

longer in a failed state anymore. The motivation for doing so would have been to provide the

predicted result of accurately keeping track of the state of the workflow.

29.   As to claims 12-16, they are rejected for the same reasons as stated in the rejections of

claims 4-8, respectively.

30.   As to claims 19-21, they are rejected for the same reasons as stated in the rejection of

claims 4, 7, and 8, respectively.

31.   As to claims 24-26, they are rejected for the same reasons as stated in the rejection of

claims 4, 7, and 8, respectively.

32.   As to claims 29-31, they are rejected for the same reasons as stated in the rejection of

claims 4, 7, and 8, respectively.

33.   As to claims 34-36, they are rejected for the same reasons as stated in the rejection of

claims 4, 7 and 8, respectively.

Response to Arguments

34.   Applicant's arguments have been fully considered but are moot in view of the new

grounds of rejections.

35.   *Applicant stressed the limitation of "successfully completed" and that the prior art*

references didn't disclose or suggest this limitation (page 10 of the Remarks).

36.   Newly added reference Kitagawa teaches queuing of workflows and sending a

notification to the requesting client such as a "normal completion notice" when the workflow is

successfully completed (col. 8, lines 43-53). It is clear that Kitagawa's "normal completion"

relates to the Applicant's successful completion while Kitagawa's "abnormal completion" relates

to the Applicant's unsuccessful completion of the workflow.

37.   *Applicant argues on page 10 of the Remarks that a* **notification** *is sent to the execution-*

requesting client **only** *if a workflow is successfully completed* <u>*by a first workflow engine.*</u>

However, the newly amended claim language creates problems to the claims. Claim 1,

line 8 states a work assignment message that could be interpreted to be a notification. In

addition, dependent claim 8 states that a notification is sent to the execution-requesting client if

the workflow is completed by the second workflow engine, which contradicts claim 1 in that

only a notification can be sent if successfully completed by the first workflow engine. The

Examiner is confused in regards to the scope of the claims. Nevertheless, the Examiner

introduces Hayashi that teaches a workflow system such that if a task is a failure or not

completely successful, it is then put in a failure state, and another executing means is assigned to

recover the task from the failure state (see claim 1). This is all done without sending a
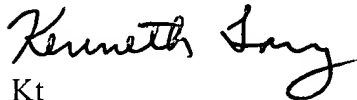
notification message.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Kenneth Tang whose telephone number is (571) 272-3772. The

examiner can normally be reached on 8:30AM - 6:00PM, Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

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applications is available through Private PAIR only. For more information about the PAIR

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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